

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

Infection Prevention and Control

**SUBJECT: CONSTRUCTION: INFECTION CONTROL
RISK ASSESSMENT (ICRA)**

Policy No.: IC400
Create Date: 01/07/2007
Revision Date: 07/2012
Reviewed: 06/2022
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This construction infection control risk assessment policy and procedures were adapted from Los Angeles County Department of Health Services Policy #918, 918.01, and 918.5 for Rancho Los Amigos National Rehabilitation Center.

Purpose: To prevent the spread of diseases, which may be caused by construction induced airborne pollution in susceptible individuals (patients, staff and the public) in Department of Health Services (DHS) facilities. Construction is defined here as building additions, demolition, retrofit, alterations, new construction, and some maintenance activities

Policy: Rancho Los Amigos National Rehabilitation Center (Rancho) will establish a multidisciplinary team that includes Infection Prevention and Control staff to coordinate demolition, construction, and renovation projects and to consider proactive preventive measures at the inception; produce and maintain summary statements of the team's activities.

All contractors, including, but not limited to independent contractors, subcontractors, consultants, engineers, architects, vendors, inspectors, and their employees and agents are herein known as "CONTRACTOR." Facilities Management and all other Los Angeles County Department personnel shall adhere to the following procedures when engaged in construction activities at Rancho.

Rationale: Construction and maintenance can be a risk factor for infections in patients, staff, and the public, especially those who are immunosuppressed. Activities that disturb dust may be associated with various illnesses. The dispersion of dust can spread spores, which when inhaled by susceptible individuals may result in invasive fungal disease.

Procedure:

I. Construction and Remodeling:

- A. The Infection Prevention and Control Coordinator must review and approve infection prevention and control plans for new construction or renovation projects to ensure a safe environment. These infection prevention and control plans must include measures to contain dust, debris, etc. and protect the patients, employees and visitors in this environment. Facilities Management and the Project Manager will be responsible for routinely monitoring construction/renovation areas for compliance with this policy.

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- B. Procedures that relate to pre-construction planning activities at design and preconstruction phases shall involve meetings with the Infection Prevention and Control Coordinator and representatives of the project, as determined by the Facility Manager and the Project Manager.
- C. In the event of an emergency that requires construction at Rancho, or a breach in Infection Prevention and Control precautions during construction, the Infection Prevention and Control Coordinator on duty will be contacted and consulted by the Facility Manager on duty regarding the risks and precautions classifications to be followed.
- D. The Infection Prevention and Control Coordinator and the Facility Safety officer have independent authority to stop construction-related activities immediately when:
 - 1. The patients, staff and the public may be adversely affected by infection prevention and control hazards generated during construction-related activities, and
 - 2. The infection prevention and control precautions and/or engineering controls are inadequate to contain the hazard.
- E. When a work stoppage is in effect, the Facility Safety Officer and/or the Infection Prevention and Control Coordinator must notify each other and the Project Manager immediately.
- F. The Project Manager has the authority to restart a halted construction activity in consultation with the Infection Prevention and Control Coordinator and the Facility Safety Officer.
- G. Any construction at Rancho that requires entering the ceiling, walls, or floors must be approved by the Facilities Management Department and the Infection Prevention and Control Coordinator **prior** to their start date. The Class of Precaution may be of singular or multiple classes as identified on the drawings. If more than one Class of Precautions is identified, select the higher class.
- H. The department generating the work will notify the Housekeeping department of the construction and cleaning requirements and notify the department under construction to facilitate the movement/admission of patients and to alert staff, who may be immunosuppressed, of the potential danger to exposure of dirt and debris. Signage of construction activities will be posted at the construction site by the department generating the work.

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- I. The Infection Control Risk Assessment (ICRA) form (attachment 1 and 2) and the floor plan (see attachment 3 for a sample plan) will be completed by the Project Manager or his/her designee to determine the construction activity, type, and risk group. The ICRA is required for all construction projects and each phase of the project.
- J. The ICRA is sent to Infection Prevention and Control to determine the Precaution level. Class of Precautions defines the protective measures required by the contractor during a construction project.
- K. A copy of the ICRA form is returned to the Facilities Management Department.
- L. Projects classified as Class III or IV requires daily compliance monitoring by the Project Manager or designee. Results of the monitoring are recorded on the Construction Monitoring form (attachment 4) and a copy is sent to Infection Prevention and Control each week or at the end if the project is less than one week.
- M. Outside contractors will be given a copy of the ICRA form, the Infection Control Workmanship Requirements, and policy for Health Screening and they are signed by the contractor. A copy is retained by the department. Health screening for tuberculosis and serologic tests for rubella, measles and varicella is required for contractors or county employees who will be performing construction-related activities for more than 2 weeks inside Rancho facility. (Refer to DHS Policy 981.5: Design/construction and maintenance risk assessment - Health screening and clearance policy for details requirement),
- N. Before a project starts, Contractor Training is required for outside contractors, contractors' employees, subcontractors, and vendors who intend to work at the project site for a period of time over two weeks. This training is developed by DHS. No individual will be permitted to work at the project site without first attending the contractor training. A list of those employees is kept on file by the Facilities Management Department.

II. Workmanship

- A. During construction/renovation work within the interior space of the hospital **ALL** Infection Control construction measures as required by the ICRA form will be followed (attachment 1).
- B. Complete critical barriers must be constructed before construction takes place. Airtight plastic barriers (fire rated Visqueen) must extend from floor to ceiling and seams must be sealed to prevent dust from escaping. The contractor will check the integrity of this barrier at all times. Duct tape applied over the frame and door is acceptable. All penetrations in existing barriers must be sealed airtight.

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- C. When openings are made into existing ceilings, use control cube or provide an enclosure around ladder sealing off the opening. Material used is to be secured at the ceiling and the floor. Safety cones are to be installed near the base of the ladder.
- D. Any ceiling access panels open for investigation beyond sealed areas shall be replaced immediately when the investigation is completed. Do not leave open areas unattended.
- E. The Contractor is responsible for maintaining equipment and replacement of HEPA and other filters in accordance with manufacturer's recommendations. The Contractor shall make daily checks on the cleanliness of intake filters in the ventilation system.
- F. The Contractor shall provide means necessary to protect work in place and existing finishes and material. Damage on kind to work, finishes or material as a result of infection prevention and control measures shall be repaired immediately and restore to the previously existing condition.
- G. The Contractor shall obtain the "Contractor Information Packet" from Facilities management. This packet details health clearance, Infection Prevention and Control, safety education requirements, etc. Contractors will not be permitted to work in DHS facility project sites until all requirements are met. The Contractor and Facilities Management are responsible for maintaining all records related to Infection Prevention and Control issues.

Pre-Construction Infection Prevention and Control Risk Assessment and Precautions

Project: Location: Date:	Least Risk Areas Group 1	Medium Risk Areas Group 2	Medium-High Risk Areas Group 3	Highest Risk Areas Group 4
Description of Construction Activity:	Offices, Support areas, Lobbies, Environmental Services	Non-invasive patient care: Cardiology, PT/OT, Medical Offices, CT Scanner, Resp. Therapy, Pharmacy, Ultrasound, Breast Diagnostic	Interventional Radiology, OSSA Nuclear Medicine, Central Sterile Processing, Echocardiology, Phlebotomy Lab, EKG/Heart Station, GCRC	Areas with Immuno-compromised Patients - Transplant area, Cardiac Cath, ORs, ICUs, Isolation Rooms , Patient Wards, Endoscopy, Dialysis, Pharmacy Admixture, Radiation Therapy, Infusion Unit, Nurseries
Type A/Minor: Inspections above ceiling, minor repair, painting (no patching). Minor electrical work, plumbing, similar work with little or no drilling, cutting, or other dust-raising activity. Normal maintenance activity.	Class 1 precautions/ work practices	Class 2 precautions/ work practices	Class 2 precautions/ work practices	Class 3 precautions work practices
Type B/Small Scale Projects: Installation of electrical and computer cabling, opening into chases and concealed spaces, cutting plaster and drywall, sanding and other dust making / activity within a room or other controlled area. Usually one to three shifts.	Class 1 precautions/ work practices	Class 2 precautions/ work practices	Class 3 precautions/ work practices	Class 3 precautions/ work practices
Type C/Larger Scale Projects: Removing floor coverings, sanding plaster walls, wall demolition and construction. Duct work, electrical work above ceilings, major ceiling work. Usually more than three days work.	Class 2 precautions/ work practices	Class 2 precautions/ work practices	Class 3 precautions/ work practices	Class 4 precautions/ work practice
Type D/Major Renovation and Construction: Major demolition of areas, particularly those open to patient care areas (less than one hour work). Work on HVAC Systems, projects scheduled for more than three weeks total activity.	Class 3 precautions/ work practices	Class 3 precautions/ work practices	Class 4 precautions/ work practices	Class 4 precautions/ work practices

(Precautions and work practices for Class 1-4 are described on page 1 of the Pre-Construction Risk Assessment Form)

INFECTION PREVENTION AND CONTROL CONSTRUCTION CONSULTATION FORM # 1

	DATE _____	
BUILDING _____	FLOOR _____	AREA _____
START DATE _____	SHIFT _____	
ESTIMATED COMPLETION DATE _____		
CONSTRUCTION HOURS _____		
PURPOSE OF CONSTRUCTION _____		

SUMMARY OF CONSTRUCTION TO BE PERFORMED _____		

SPECIAL HAZARD (S) _____		

POSSIBLE INCONVENIENCES _____		

HANDLING OF CONSTRUCTION DEBRIS _____		

INSTALLATION OF CONSTRUCTION BARRIER/S OR WALL/S? _____		
MECHANICAL DEVICE(S) TO PREVENT OR LIMIT EXPOSURE _____		
SECURING AIR DISTRIBUTION SYSTEM? _____		
SPECIAL PROCEDURES _____		

CONTRACTOR _____	PHONE _____	
SUPERINTENDENT _____	PHONE _____	
INFECTION PREVENTION AND CONTROL COORDINATOR _____	PHONE _____	
PROJECT MANAGER _____	PHONE _____	

INFECTION PREVENTION AND CONTROL CONSTRUCTION CONSULTATION

FORM # 2

Attachment 3

Project #:		Job #:	Control No:		
Project Area:		Project Start Date:			
Project Coordinator:		Estimated Completion Date:			
General Contractor:	Pager #:	OSHPD Permit #:			
Contractor Superintendent:		Superintendent Telephone #:			
YES	NO	CONSTRUCTION ACTIVITY	YES	NO	INFECTION PREVENTION AND CONTROL RISK GROUP
		TYPE A: Inspection, non-invasive activity.			GROUP 1: Lowest Risk
		TYPE B: Small scale; short duration, minimal dust generating activity			GROUP 2: Medium Risk
		TYPE C: Activity that generates moderate to high levels of dust			GROUP 3: High Risk
		TYPE D: Major demolition and construction, activities requiring consecutive work shifts.			GROUP 4: Highest Risk
RISK GROUP		CONSTRUCTION ACTIVITY			
		TYPE A	TYPE B	TYPE C	TYPE D
GROUP 1	Low Risk	CLASS I	CLASS II	CLASS II	CLASS III or CLASS IV
GROUP 2	Medium Risk	CLASS I	CLASS II	CLASS III	CLASS IV
GROUP 3	High Risk	CLASS I	CLASS II	CLASS III or CLASS IV	CLASS IV
GROUP 4	Highest Risk	CLASS III	CLASS III or CLASS IV	CLASS III or CLASS IV	CLASS IV
CLASS I		<p>a. Must obtain infection control consult before construction begins.</p> <p>b. Signage will be required and posted at the facility by the Infection Control Coordinator or their designee.</p> <p>c. Execute work by methods to minimize raising dust from construction operation.</p> <p>d. Immediately replace a ceiling tile displaced for visual inspection.</p>			
DATE:					
INITIALS:					
CLASS II		<p>a. Must obtain infection control consult before construction begins.</p> <p>b. Signage will be required and posted at the facility by the Infection Control Coordinator or their designee.</p> <p>c. Isolate HVAC system in areas where work is being performed.</p> <p>d. Block and seal air vents.</p> <p>e. Provide active means to prevent airborne dust from dispersing into atmosphere.</p> <p>f. Water mist or wet work surfaces to control dust while cutting.</p> <p>g. Seal unused doors with duct tape.</p> <p>h. Place/replace dust mat at entrance and exit of work area daily.</p> <p>i. Contractor will wet mop areas with hospital approved disinfectant daily.</p> <p>j. Environmental Services will wipe all surfaces within immediate patient care environment and staff areas with a hospital approved disinfectant daily.</p> <p>k. Contain construction waste before transport in tightly covered containers.</p> <p>l. Contractor shall vacuum with HEPA filtered vacuum before leaving area daily.</p> <p>m. Provide biological monitoring by a third party (consultant) during work that generates a moderate to high level of dust.</p>			
DATE:					
INITIALS:					
CLASS III		<p>a. Must obtain infection control consult before construction begins.</p> <p>b. Signage will be required and posted at the facility by the Infection Control Coordinator or their designee.</p> <p>c. Remove or isolate HVAC system in areas where work is being done to prevent contamination of dust system.</p> <p>d. Complete construction of all critical barriers before construction begins. (See Infection Control During Construction Policy).</p> <p>e. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</p> <p>f. Seal holes, pipes, conduits and punctures with duct tape or other material.</p> <p>g. Do not remove barriers from work area until complete project is thoroughly cleaned and approved by Infection Control Coordinator. Vacuum work area with HEPA filtered vacuum.</p> <p>i. Remove barrier material carefully folding inward to minimize the spread of dirt and debris.</p> <p>j. Vacuum all surface with HEPA filtered vacuum to remove dust.</p> <p>k. Contain construction waste before transport in tightly covered containers.</p> <p>l. Cover transport receptacles or carts.</p> <p>m. Tape covering unless receptacle has a solid lid.</p> <p>n. Contractor shall wet mop areas with hospital approved disinfectant daily.</p> <p>o. Environmental Services will wipe all surfaces within immediate patient care environment and staff areas with a hospital approved disinfectant daily.</p> <p>p. Provide biological monitoring by a third party (consultant) during work that generates a moderate to high level of dust.</p>			
DATE:					
INITIALS:					
CLASS IV		<p>a. Must obtain infection control consult before construction begins.</p> <p>b. Signage shall be required and posted at the facility by the Infection Control Coordinator or their designee.</p> <p>c. Remove or isolate HVAC system in areas where work is being done to prevent contamination of dust system.</p> <p>d. Complete construction of all critical barriers before construction begins. (See Infection Control During Construction Policy).</p> <p>e. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.</p> <p>f. Seal holes, pipes, conduits and punctures with duct tape or other materials.</p> <p>g. Do not remove barriers from work area until work area is thoroughly cleaned by the Contractor and inspected/approved by the Environmental Service Manager or the Infection Control Coordinator. Vacuum work area with HEPA filtered vacuum.</p> <p>i. Remove barrier material carefully folding inward to minimize spreading of dirt and debris.</p> <p>j. Vacuum all surfaces with HEPA filtered vacuum to remove dust.</p> <p>k. Contain construction waste before transport in tightly covered containers.</p> <p>l. Cover transport receptacles or carts. Tape covering unless receptacle has a solid lid.</p> <p>m. Contractor will wet mop areas with hospital approved disinfectant daily. Any dust tracked outside the area shall be removed immediately.</p> <p>n. Environmental Services will wipe all surfaces within immediate patient care environment and staff areas with a hospital approved disinfectant daily.</p> <p>o. Provide biological monitoring by a third party (consultant) during work that generates a moderate to high level of dust.</p>			
DATE:					
INITIALS:					
Additional Requirements:					
Contractor (Print):			Sign:	Date:	
Project Manager (Print):			Sign:	Date:	
Infection Prevention and Control Coordinator (Print):			Sign:	Date:	

CONSTRUCTION ACTIVITY TYPE

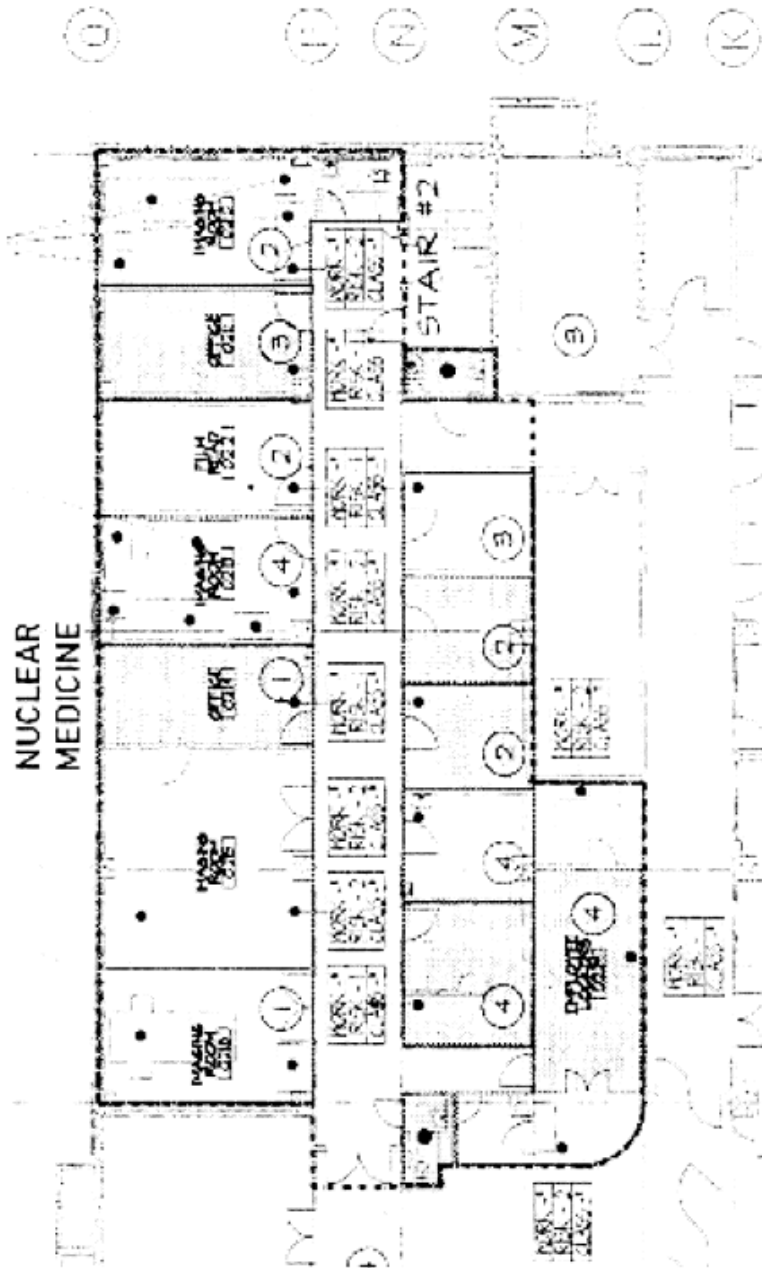
TYPE A	Inspection and Non-Invasive Activities. Includes but is not limited to: (1) removal of ceiling tiles for visual inspection limited to 1 tile per 50 square feet, (2) painting (but not sanding), (3) wall covering, electrical trim work, minor plumbing and activities that do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.
TYPE B	Small-scale, short duration activities that create minimal dust. Includes but is not limited to: (1) installation of telephone and computer cables, (2) access to chase spaces, (3) cutting of walls or ceiling where dust migration can be controlled.
TYPE C	Any work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies. High level of dust is defined as suspended articles that are visible to the naked eye and a moderate level of dust that which is perceivable on horizontal surfaces after eight to twelve hours. Includes but is not limited to: (1) sanding walls for painting or wall coverings; (2) removing floor coverings, ceiling tiles and casework; (3) new wall construction; (4) minor ductwork or electrical work above ceilings; (5) major cabling activities; (6) any activity that cannot be completed within a single work shift; (7) plumbing work requiring cutting into walls.
TYPE D	Major demolition and construction projects. Includes but is not limited to: (1) activities that require consecutive work shifts, (2) activities which require heavy demolition or removal of a complete ceiling system, (4) new construction.

INFECTION CONTROL RISK GROUPS

Low Risk	Medium Risk	High Risk	Highest Risk
Group 1	Group 2	Group 3	Group 4
Office Areas Storage Rooms Conference Rooms	Ambulatory Care (Non-specialty clinics) Echocardiography Occupational / Physical Therapy Psychiatry Areas Respiratory Therapy Waiting Rooms	All Nursing Units Emergency Departments Laboratories Food Preparation / Serving Areas + Cafeteria Interventional Radiology Labor & Delivery Newborn Nursery Outpatient Surgery and Specialty Clinics Pediatrics Post Anesthesia Care Unit Admissions Area Physical Therapy Tank Area Nuclear Medicine Radiology/MRI	All Critical Care Units ICUs /CMAs Any area caring for immuno-compromised patients (Oncology, Infusion Center, etc.) Burn Unit Cardiac Catheterization Area Heart Center Operating Rooms Pharmacy Sterile Reprocessing Transplant Unit Dialysis Unit Endoscopy Area Pulmonary Function

LAC DHS INFECTION CONTROL CONSTRUCTION CONSULTATION SAMPLE PLAN

INFECTION CONTROL CONSTRUCTION CONSULTATION SAMPLE PLAN



TO BE DETERMINED BY CONTRACTOR WITH INPUT FROM HARBOR UCLA INFECTION CONTROL COMMITTEE
RISK CATEGORY OF SPACE AS DEFINED BY DEPARTMENT OF HEALTH SERVICES - SEE INFECTION CONTROL SECTION IN GENERAL CONDITIONS OF THE SPECIFICATIONS
TO BE DETERMINED BY CONTRACTOR WITH INPUT FROM HARBOR UCLA INFECTION CONTROL COMMITTEE

Rancho Los Amigos Rehabilitation Center
Construction Rounds Compliance Monitor

Contraction Location: _____

Review Date: _____ Monitored by: _____

	STANDARDS	Met	Not Met	N/A	RESPONSIBLE PERSON and COMMENT
1.	Contractors Wearing Required Identification				
2.	Construction Personnel Wearing required PPE (e.g., hardhat, protective eyewear, footwear)				
3.	Air Pressure Barriers Active (e.g., negative pressure maintained, exhaust fans functioning, air quality adequate, no excess fumes/vapors)				
4.	Contractors Following Safe Work Practices (e.g., observe for trip and fall hazards, ladder safety, smoking rules met)				
5.	Walk-Off Mats Clean & Adequate to contain Construction Dust)				
6.	Construction Barriers Appropriate for Patient Population (sealed plastic with overlay, plywood barrier with door, closed patient doors etc.)				
7.	Construction Area Secure (e.g., barriers adequate to prevent entry of unauthorized persons, vermin, etc.)				
8.	Patient Care Equipment & Items Removed from Construction Area				
9.	Construction entry & Adjacent Areas Free of Dust & Debris				
10.	Construction Carts Covered During Transport of Materials				
11.	Construction Personnel & Materials Transported on Dedicated Elevators (e.g., non-patient use elevators)				
12.	Materials Utilized are Fireproof (e.g., as required for project)				
13.	Ceiling Tiles Replaced When space Above Ceiling Not Being Accessed (if occupied area, adjacent patient room doors are closed)				

Additional Comments:

References

- Bartley, J. (2002). *Infection Control toolkit series: Construction and Renovation* (2nd ed.). Washington DC/ Association of Professionals in Infection Control and Epidemiology.
- Los Angeles County Department of Health Services Policies and Procedures. (2004). *Design/construction and maintenance risk assessment: policies and procedure – Infection Control. Policy 918, 918.01, and 918.5.*
- Los Angeles County Harbor-UCLA Medical Center. (2004). *Infection Control Risk Assessment (ICRA).*